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DISCUSSION.

THE METHOD OF IMPRESSION AND SOME RECENT CRITICISM.

By E. B. TITCHENER.

In the course of a recent paper entitled *Die Grundformen der Gefühle*,¹ N. Alechsieff takes occasion to criticise the method of impression in general and my own work with that method in particular. I am not here concerned to offer a counter-criticism of Alechsieff's method and results; but I desire, so far as possible, to meet the objections which he urges against the method of impression.

I read with some surprise the following sentence: "In einer sehr eingehender Kritik hat M. Kelchner die Mängel der Eindrucks-methode hervorgehoben."² A second reading of Kelchner's article showed, however, that the statement has a certain justification. At the same time, it is distinctly misleading.

Kelchner³ is recommending the use of the expressive method in connection with introspection. "Man hat," she says, "der Ausdrucks-methode gelegentlich vorgeworfen dass sie die Selbstbeobachtung vernachlässige." As a matter of fact it may be shown "dass die Selbstbeobachtung durch die Registrierung der Ausdrucksvorgänge in hohem Masse unterstützt werden kann." On the other hand, "ob *reine* Selbstbeobachtung imstande ist, den an sie gestellten Anforderungen zu genügen, muss bezweifelt werden." What Kelchner is criticising, so far, is *pure* introspection (*italics K.'s*), that is, introspection under casual, non-experimental conditions. The difficulties of pure introspection are two: unaccustomed direction of attention, and the fusion of affective processes with organic sensations.

It is clear that this pure introspection is not identical with the method of impression. Kelchner now proceeds to criticise, not the introspective value of that method, but the value of the introspections accompanying the method which she herself employed, the method of expression. There are three sources of error: liability to distraction of attention, with resulting scrappiness of observation; illusions due to the rules laid down for observation (*e. g.*, illusions of expectation); and inaccuracy of report. Kelchner seeks to show how and to what extent these errors may be combated in work done by the expressive method.

Alechsieff, however, goes on: "Sie findet dass diese Methode (the method of impression) alle Nachteile der reinen Beobachtung besitzt, und vor allem" the three just mentioned. That is to say, the three sources of error discovered by Kelchner "im Laufe unserer Untersuchung" by the expressive method are transferred bodily by Alechsieff to the charge of the method of impression, which Kelchner does not mention. I think that Alechsieff's statement may fairly be characterized as misleading.

There is, nevertheless, a certain justification for the statement.

¹ Wundt's *Psychologische Studien*, iii, 1907, 156 ff.

² *Op. cit.*, 162.

³ *Archiv. f. d. gesammte Psychol.*, v, 1905, 107 ff.

Kelchner concludes her criticism by saying: "Unsere Erfahrungen . . . tun . . . die völlige Unzulänglichkeit einer Untersuchung dar, die lediglich die Angaben der Vp. verwendet;" and she refers in a footnote to Orth's "Gefühl und Bewusstseinslage." When we remember that Orth's thesis, the work of which was done with Külpe at Würzburg, was accepted in 1903 by Meumann as a Zurich doctorate dissertation; and that Kelchner's investigation, made under Meumann's direction and edited by him, was ready for the printer in Feb., 1904: it is a safe guess that Kelchner had Orth in mind throughout her criticism of introspection. In so far, therefore, as Orth employed the method of impression, Alechsieff's statement may be constructively justified.

The method used by Orth is the method of question and answer¹ which Wundt, in a somewhat different connection, has quite recently criticised.² I am inclined to think that Wundt's criticism goes too far.³ And I suppose that, in a very general sense, the method of question and answer may be described as a method of impression. At the same time, what one ordinarily thinks of, when the method of impression is mentioned, is either the serial method or the method of paired comparisons:⁴ so that Alechsieff's statement is, again, misleading. Now the method of impression, in this customary and narrower sense, is not open to Kelchner's objections. Since a long series of stimuli, or of stimulus pairs, is laid before the observer, there is every chance for a constant direction of attention. Since the introspection required is of the simplest kind, there need be no scrappiness of observation. Since the rules laid down for observation are of the same unequivocal sort, there can be no illusion of expectation, etc. Since the 'report' consists simply in writing down a number or a letter, or in pointing with the finger to the one of two impressions, the chances of inaccuracy are minimal. On the other hand, the method has definite advantages. It allows us to cover a very wide range of stimuli, within a given sense department, in a comparatively short time; it furnishes an easy way of testing the constancy of the affective judgment whether for different observers or for the same observer at different times; and as the affective experience is cumulative, all of the same order, it affords excellent opportunity, in the intervals between sectional series, for detailed introspective analysis. Moreover, it is the only method now in the field which holds out hope of a differentiation, a determination of the nature and number, of the affective qualities. And lastly, it combines objective and subjective control, as every experimental procedure must do, and effects this combination more simply and more reliably than does the method of expression. I return to this point later. In the meantime it is enough to point out, first, that the introspective difficulties which Kelchner finds are, admittedly and evidently, difficulties characteristic of the method of expression and of that alone; and secondly that a method which, as Kelchner and Alechsieff put it, "lediglich sich auf die Angaben der Beobachter stützt," cannot be identified outright with the method of impression.

I turn to Alechsieff's criticism of my paper in the Wundt *Festschrift*. The critic's first point is that I am to blame for not having taken part in the experiments, "obschon sie nur auf Grund der subjektiven Methode gemacht worden sind."⁵ This objection seems to rest upon a sheer misunderstanding. I explain in the paper itself that the work

¹ The method really ranges from Brahn's Reizmethode (Philos. Studien, xviii, 1903, 133) to the Ausfragemethode proper; but there is no difference in principle.

² Psychol. Studien, iii, 1907, 301 ff.

³ Cf. my remarks on Brahn, Philos. Studien, xx, 1902, 404.

⁴ Cf. Wundt, Phys. Psych., ii, 1902, 267. The Reizmethode is not mentioned.

⁵ *Op. cit.*, 167 f.

began with experiments of my own, in which I learned two things: that the required affective judgments might be passed without especial difficulty, and that introspection was facilitated by a particular phrasing of the instructions.¹ Alechsieff has apparently overlooked this paragraph. I then say that I took no further part in the experiments "als Versuchsperson," but that they were carried out "unter meiner directen Aufsicht." These statements mean simply what they say,—that I did not join the research groups, as observer, during the course of the published experiments: there is nothing in them to indicate that I discontinued my observations altogether. Indeed, I later promise for the future "eine exacte Verwerthung der Urtheilsdaten,"² which implies with sufficient clearness that I had gathered such data at first hand. Suppose that I had taken my place before the harmonical with the other observers: would not the critic have raised the cry of suggestion? Suppose that I had published my own curves: would not the critic have charged prepossession?

In his further criticism, Alechsieff confines himself to the objective aspect of my experiments, and says nothing of their subjective side. "Der Grundgedanke Titcheners ist der, dass es unmöglich sei, durch ein und denselben Reiz in derselben Weise zwei verschiedene Gefühlsqualitäten hervorzurufen. Dieser Gedankengang ist nicht zwingend."³ But then it is not either my *Grundgedanke*. I quote from Hayes: "On the objective side there is the appeal to the 'curves.' . . . It would surely be a strange thing if a given set of stimuli affected a given observer by way of excitement-depression (or strain-relaxation) precisely as it affected him by way of pleasantness-unpleasantness. Coincidence might occur here and there; but the wider the range of observers, the larger the number of stimuli employed, and the more varied the type of the affective judgment, the less likely would it be, on the basis of the plural theory, that coincidence should appear. On the subjective side, again, there is the appeal to the introspection of the observers. If the observers declare that the affective judgment in terms of pleasantness-unpleasantness is direct, easy and natural, while judgment in terms of strain-relaxation and excitement-depression is forced, difficult, associatively mediated, etc., then the evidence of the method is in favor of the dual theory. And if, further, the observers state that their judgments of excitement-depression and strain-relaxation, so far as they are affective at all, are based upon pleasantness-unpleasantness, this evidence is proportionately strengthened. . . . The more numerous the observers, the more varied the stimuli, the more nearly exhaustive the affective categories, the more certain will the outcome be."⁴ The method affords a twofold control, objective and subjective, and appeal to the subjective aspect is made with all plainness in my paper.⁵ Alechsieff has overlooked these passages. He has also, publishing in August, 1907, overlooked altogether the work of Hayes, published in July, 1906.

I have no wish to deny that the method of impression is still in the first stages of its development. On the contrary, I believe that this characterization holds both of the serial method, in its two forms, and of the method of paired comparisons; still more of Brahn's stimulus

¹ *Philos. Studien*, xx, 1902, 388.

² *Op. cit.*, 390. Materials towards the analysis of the affective judgment have since been published from the Cornell Laboratory by Hayes (this *Journal*, xvii, 1906, 358 ff.); and further work, in continuation of Hayes' and my own, is now in progress.

³ *Op. cit.*, 208; cf. 219. In the latter passage Alechsieff outlines a programme of further work, which I should have done well to undertake. This is always a safe line of criticism; but it would have come with better grace from a critic who had gone to the bottom of the work already done.

⁴ *Op. cit.*, 360 f.

⁵ *Op. cit.*, 389, 394, 394-6, 403, 405.

method, and its sub-forms of stimulus comparison and stimulus compensation. We must not forget, however, that the method of impression, in any form, has received less extended trial than has the rival method of expression. There is now a tendency to combine the latter method with an introspective procedure, and we shall know before long within what limits the combination is possible. At all events, it is to the impressive method, or to what may be termed the impressive aspect of the combined method, that we must look for an answer to the question of the nature and number of the affective qualities. I hope, therefore, that in meeting Alechsieff's criticisms I have done more than merely remove a few personal misunderstandings.